

WHAT IS CLAIMED IS:

1. Ratchet socket for fitting onto a screwed member, the ratchet socket being drivable by a tool to wrench the screwed member, the ratchet socket comprising:

a cylindrical main body; and

at least one ratchet mechanism disposed in the main body, the main body being formed with a circular hole and a through hole in which the ratchet mechanism is disposed, the circular hole being formed in the main body, the through hole being formed on a circumference of the main body and communicating with the circular hole;

said ratchet mechanism including:

a ratchet wheel rotatably disposed in the circular hole, an outer circumference of the ratchet wheel being formed with continuous teeth;

a dog member movably accommodated in the through hole, an inner end of the dog member facing the ratchet wheel and being formed with multiple teeth for engaging with the teeth of the ratchet wheel; and

a resilient hoop fitted around outer circumference of

the main body to exert a resilient force onto the outer side of the dog member, keeping the dog member resiliently engaged with the ratchet wheel, whereby when the dog member is engaged with the ratchet wheel, the ratchet mechanism provides a ratchet effect and the main body of the socket is one-way drivingly engaged with the ratchet wheel.

2. Ratchet socket as claimed in claim 1, wherein the ratchet mechanism has a fixed driving direction.
3. Ratchet socket as claimed in claim 1, wherein the ratchet mechanism has switchable driving directions.
4. Ratchet socket as claimed in claim 1, wherein the circular hole, through hole and the ratchet mechanism are disposed at one end of the main body.
5. Ratchet socket as claimed in claim 4, wherein the end of the main body equipped with the ratchet mechanism is a wrenching end, the ratchet wheel being formed with a polygonal fitting hole for fitting on a screwed member.
6. Ratchet socket as claimed in claim 5, wherein the other end of the main body is a driving end formed with an insertion hole for a tool or a handle to insert therein.
7. Ratchet socket as claimed in claim 5, wherein the other end of

the main body is a driving end, a tool being fixedly connected with the driving end.

8. Ratchet socket as claimed in claim 5, wherein the other end of the main body is a driving end, a polygonal driving section being disposed on outer circumference of the driving end for a tool to hold.
9. Ratchet socket as claimed in claim 4, wherein the end of the main body equipped with the ratchet mechanism is a driving end, the other end of the main body being a wrenching end formed with a polygonal fitting hole for fitting on a screwed member.
10. Ratchet socket as claimed in claim 9, wherein the ratchet wheel is formed with an insertion hole for a tool or a handle to insert therein.
11. Ratchet socket as claimed in claim 9, further comprising a tool fixedly connected with the ratchet wheel.
12. Ratchet socket as claimed in claim 9, wherein the circumference of the wrenching end of the main body is formed with a notch.
13. Ratchet socket as claimed in claim 1, wherein the circular hole, through hole and the ratchet mechanism are disposed at a middle section of the main body, the ratchet wheel of the ratchet mechanism being formed with an insertion hole, two ends of the main body being respectively formed with two fitting holes

communicating with the insertion hole.

- 14.Ratchet socket as claimed in claim 13, wherein the two fitting holes have identical sizes.
- 15.Ratchet socket as claimed in claim 13, wherein the two fitting holes have different sizes.
- 16.Ratchet socket as claimed in claim 1, wherein each of two ends of the main body is equipped with a ratchet mechanism, the ratchet wheel of each ratchet mechanism being formed with a polygonal fitting hole, a driving section being disposed on the main body.
- 17.Ratchet socket as claimed in claim 16, wherein the two ratchet mechanisms both have fixed driving directions which are reverse to each other.
- 18.Ratchet socket as claimed in claim 16, wherein the two ratchet mechanisms have switchable driving directions.
- 19.Ratchet socket as claimed in claim 16, wherein the interior of the main body is formed with an insertion hole between the two ratchet mechanisms, the insertion hole communicating with the fitting holes and serving as the driving section for a tool to insert therein.
- 20.Ratchet socket as claimed in claim 16, wherein the driving

section is polygonal and disposed on outer circumference of the main body for a tool to hold.

21.Ratchet socket as claimed in claim 16, wherein the fitting holes have identical sizes.

22.Ratchet socket as claimed in claim 16, wherein the fitting holes have different sizes.

23.Ratchet socket for fitting onto a screwed member, the ratchet socket being drivable by a tool to wrench the screwed member, the ratchet socket comprising:

a cylindrical main body; and

at least one ratchet mechanism disposed in the main body, the main body being formed with a circular hole and a through hole in which the ratchet mechanism is disposed, the circular hole being formed in the main body, the through hole being formed on the main body corresponding to the circular hole, an outer end of the through hole communicating with outer circumference of the main body, an inner end of the through hole communicating with the circular hole, one side of the through hole being a straight abutting face, the other side of the through hole being a slope face, a gap between the slope face and the abutting face being inward tapered;

said ratchet mechanism including:

a ratchet wheel rotatably disposed in the circular hole, an outer circumference of the ratchet wheel being formed with continuous teeth;

a dog member movably accommodated in the through hole, an inner end of the dog member facing the ratchet wheel and being formed with multiple teeth for engaging with the teeth of the ratchet wheel; and

a resilient hoop fitted around outer circumference of the main body to exert a resilient force onto the outer side of the dog member, keeping the dog member resiliently engaged with the ratchet wheel, when the dog member is driven by the ratchet wheel to abut against the abutting face, the dog member is kept engaged with the ratchet wheel, while when the dog member is forced to lean against the slope face, the dog member is moved outward along the slope face to disengage from the ratchet wheel, whereby the ratchet mechanism provides a one-way driving effect.

24.Ratchet socket as claimed in claim 23, wherein the circular hole, through hole and the ratchet mechanism are disposed at one end of the main body.

25.Ratchet socket as claimed in claim 24, wherein the end of the main body equipped with the ratchet mechanism is a wrenching end, the ratchet wheel being formed with a polygonal fitting hole for fitting on a screwed member.

- 26.Ratchet socket as claimed in claim 25, wherein the other end of the main body is a driving end formed with an insertion hole for a tool or a handle to insert therein.
- 27.Ratchet socket as claimed in claim 25, wherein the other end of the main body is a driving end, a tool being fixedly connected with the driving end.
- 28.Ratchet socket as claimed in claim 25, wherein the other end of the main body is a driving end, a polygonal driving section being disposed on outer circumference of the driving end for a tool to hold.
- 29.Ratchet socket as claimed in claim 24, wherein the end of the main body equipped with the ratchet mechanism is a driving end, the other end of the main body being a wrenching end formed with a polygonal fitting hole for fitting on a screwed member.
- 30.Ratchet socket as claimed in claim 29, wherein the ratchet wheel is formed with an insertion hole for a tool or a handle to insert therein.
- 31.Ratchet socket as claimed in claim 29, further comprising a tool fixedly connected with the ratchet wheel.
- 32.Ratchet socket as claimed in claim 29, wherein the circumference of the wrenching end of the main body is formed with a notch.
- 33.Ratchet socket as claimed in claim 23, wherein the circular hole, through hole and the ratchet mechanism are disposed at a middle

section of the main body, the ratchet wheel of the ratchet mechanism being formed with an insertion hole, two ends of the main body being respectively formed with two fitting holes communicating with the insertion hole.

34.Ratchet socket as claimed in claim 33, wherein the two fitting holes have identical sizes.

35.Ratchet mechanism as claimed in claim 23, wherein two ends of the main body are respectively equipped with two ratchet mechanisms having reverse driving directions, the ratchet wheel of each ratchet mechanism being formed with a polygonal fitting hole, a driving section being disposed on the main body.

36.Ratchet socket as claimed in claim 35, wherein the interior of the main body is formed with an insertion hole between the two ratchet mechanisms, the insertion hole communicating with the fitting holes and serving as the driving section for a tool to insert therein.

37.Ratchet socket as claimed in claim 35, wherein the driving section is polygonal and disposed on outer circumference of the main body for a tool to hold.

38.Ratchet socket for fitting onto a screwed member, the ratchet socket being drivable by a tool to wrench the screwed member, the ratchet socket comprising:

a cylindrical main body; and

at least one ratchet mechanism disposed in the main body, the main body being formed with a circular hole and a through hole in which the ratchet mechanism is disposed, the circular hole being formed in the main body, the through hole from one side to the other side passing through a section of the main body near the outer circumference thereof, the through hole communicating with the circular hole;

said ratchet mechanism including:

a ratchet wheel rotatably disposed in the circular hole, an outer circumference of the ratchet wheel being formed with continuous teeth;

a dog member having an elongated body and two engaging sections at two ends of the elongated body, inner sides of the engaging sections being formed with multiple teeth for engaging with the teeth of the ratchet wheel, the dog member being movably accommodated in the through hole, the two engaging sections being such respectively positioned at two ends of the through hole that the two engaging sections cannot be at the same time engaged with the ratchet wheel; and

a resilient hoop having two outward convex sections spaced from each other by a certain distance, the distance between the two convex sections being unequal to the distance

between the two engaging sections, the resilient hoop being fitted around outer circumference of the main body to resiliently press the outer side of the dog member; when turning the resilient hoop to angularly displace on the main body, one of the engaging sections is moved outward from the through hole and positioned in one of the convex sections without engaging with the ratchet wheel, while the other engaging section is resiliently pressed by the body of the resilient hoop to move into the through hole and resiliently engage with the ratchet wheel, whereby by means of turning the resilient hoop, the driving directions of the ratchet mechanism is switchable.

- 39.Ratchet socket as claimed in claim 38, wherein the circular hole, through hole and the ratchet mechanism are disposed at one end of the main body.
- 40.Ratchet socket as claimed in claim 39, wherein the end of the main body equipped with the ratchet mechanism is a wrenching end, the ratchet wheel being formed with a polygonal fitting hole for fitting on a screwed member.
- 41.Ratchet socket as claimed in claim 40, wherein the other end of the main body is a driving end formed with an insertion hole for a tool or a handle to insert therein.
- 42.Ratchet socket as claimed in claim 40, wherein the other end of the main body is a driving end, a tool being fixedly connected with the driving end.

- 43.Ratchet socket as claimed in claim 40, wherein the other end of the main body is a driving end, a polygonal driving section being disposed on outer circumference of the driving end for a tool to hold.
- 44.Ratchet socket as claimed in claim 39, wherein the end of the main body equipped with the ratchet mechanism is a driving end, the other end of the main body being a wrenching end formed with a polygonal fitting hole for fitting on a screwed member.
- 45.Ratchet socket as claimed in claim 44, wherein the ratchet wheel is formed with an insertion hole for a tool or a handle to insert therein.
- 46.Ratchet socket as claimed in claim 44, further comprising a tool fixedly connected with the ratchet wheel.
- 47.Ratchet socket as claimed in claim 44, wherein the circumference of the wrenching end of the main body is formed with a notch.
- 48.Ratchet socket as claimed in claim 38, wherein the circular hole, through hole and the ratchet mechanism are disposed at a middle section of the main body, the ratchet wheel of the ratchet mechanism being formed with an insertion hole, two ends of the main body being respectively formed with two fitting holes communicating with the insertion hole.

- 49.Ratchet socket as claimed in claim 48, wherein the two fitting holes have identical sizes.
- 50.Ratchet socket as claimed in claim 48, wherein the two fitting holes have different sizes.
- 51.Ratchet socket as claimed in claim 38, wherein each of two ends of the main body is equipped with a ratchet mechanism, the ratchet wheel of each ratchet mechanism being formed with a polygonal fitting hole, a driving section being disposed on the main body.
- 52.Ratchet socket as claimed in claim 51, wherein the interior of the main body is formed with an insertion hole between the two ratchet mechanisms, the insertion hole communicating with the fitting holes and serving as the driving section for a tool to insert therein.
- 53.Ratchet socket as claimed in claim 51, wherein the driving section is polygonal and disposed on outer circumference of the main body for a tool to hold.
- 54.Ratchet socket as claimed in claim 51, wherein the fitting holes have identical sizes.
- 55.Ratchet socket as claimed in claim 51, wherein the fitting holes have different sizes.

- 56.Ratchet socket as claimed in claim 1, wherein the outer circumference of the main body is formed with an annular groove in which the resilient hoop is inlaid.
- 57.Ratchet socket as claimed in claim 23, wherein the outer circumference of the main body is formed with an annular groove in which the resilient hoop is inlaid.
- 58.Ratchet socket as claimed in claim 38, wherein the outer circumference of the main body is formed with an annular groove in which the resilient hoop is inlaid.
- 59.Ratchet socket as claimed in claim 1, wherein the main body is composed of two halves pivotally connected with each other at one end, the ratchet mechanism, the circular hole and the through hole being disposed at a free end of one of the two halves.
- 60.Ratchet socket as claimed in claim 59, wherein the end of the half equipped with the ratchet mechanism is a wrenching end, the ratchet wheel being formed with a polygonal fitting hole.
- 61.Ratchet socket as claimed in claim 59, wherein the end of the half equipped with the ratchet mechanism is a driving end, the free end of the other half being a wrenching end formed with a polygonal fitting hole.